MEDICAL UNDERWRITING

Introduction

This document describes Aetna's underwriting adjustments for medical business sold and renewed to California Small Employer groups, through Aetna Life Insurance Company and Aetna Health Inc.

Premium rates may be adjusted for known medical conditions from 0.90 to 1.10 (that is, the final group rate could change from the current base rate from a 10% reduction to a 10% increase.

New Business Medical Underwriting

Aetna's new business medical underwriting method is as follows: Aetna uses individual health questionnaires to evaluate the medical risks associated with employer groups. The individual questionnaire is completed by each employee. We require a long form for groups 1-10 employees and a short form for groups 11-50 employees.

In general, the underwriting adjustment is a reduction or load, which is applied to the premium rates of everyone in the employer group, consistent with HIPAA requirements. This adjustment is also sometimes referred to as a "medical rate-up" (MRUP) or "rate adjustment factor" (RAF).

The underwriting adjustment is determined by comparing the history disclosed on the health questionnaire with the medical underwriting manual. Each member is assessed on his or her own level of medical risk. Observed chronic risk (debit) points are assigned based on the level of severity of each individual's condition, per the underwriting manual.

The observed chronic debit points for each member are summed to obtain the aggregate observed chronic debit points for the entire employer group. This is then used, in conjunction with the expected acute and expected chronic debit points, to determine the Relative Risk Score (RRS) for the employer group. Employer groups with the same census would have the same expected acute and chronic debit points.

RRS = (Expected Acute Debits + Observed Chronic Debits) /
(Expected Acute Debits + Expected Chronic Debits).

Using the same terminology shown on Exhibit A (page 1):

RRS = Observed Risk / Expected Risk,

where "Observed Risk" = Expected Acute Debits + Observed Chronic Debits, as in the numerator of the fraction above.

Only the group's census is used to determine the ***expected*** acute and ***expected*** chronic risk points. In this context, census means the following demographic characteristics of the employer group: Age, Gender, and Family status. The ratio of the "observed risk" score to the "expected risk" score is the relative risk score (RRS).

The RRS is then used to calculate the rate adjustment factor (RAF), within the 0.90 and 1.10 band. Please note, the term RAF is used interchangeably with Medical Rate-Up (MRUP). The rate adjustment factor equals the calculated relative risk score (RRS) divided by 0.96, where 0.96 is the "starting RRS." If the RRS is 1.000, then the RAF = 1.000 / 0.96 * 0.90 (min RAF) = 1.0417; the same logic applies to any RRS between 0.96 and 1.152.

If the calculated RRS is 0.96 or less, the RAF is 0.90 (that is, no load for health status is applied to the group's overall premium rate). If the calculated RRS is 1.173 or greater, the RAF is then 1.10 (that is, the maximum load for health status is applied to the group's overall premium rate).

Exhibit A- Sample New Business Medical Underwriting Adjustment Calculation

Exhibit A (page 1) shows the California new business medical underwriting rate up worksheet, which is used by Aetna's underwriters to set the new business rate adjustment factor (RAF) for employer groups.

Exhibit A (pages 1 – 3) shows an illustrative medical rate-up calculation for a hypothetical group of 7 subscribers, in which three members have a medical condition

Based on the medical questionnaire, the underwriter would select the risk points for the member's medical conditions [e.g., 2,000 risk points for a severe back] and enter the risk points into the rate-up worksheet. The worksheet produces observed and expected risk scores, and the relative risk score (RRS).

In the hypothetical example, the relative risk score is 0.91 [3,665 (observed risk) / 4,005 (expected risk)]. The medical rate-up for this hypothetical case would be 0.90 [where 0.90 = .9151 / 0.9600 subject to min/max RAF of 0.90 & 1.10. Therefore [(relative risk score) / ("starting RRS")] = .9151/.96 = .9532. Since this is below the minimum RAF of 0.90 the RAF is set to the minimum RAF allowed (0.90). The group's final premium rate would be 0.90 multiplied by the current base rate.

Renewal Business Medical Underwriting

In markets that allow small group rates to be adjusted for health status, Aetna uses a Predictive Modeling Methodology to estimate each group's expected claims relative to other groups with the same demographic characteristics. The risk assessment tool used for Predictive Modeling was created by Symmetry Health Systems and uses both diagnostic and pharmacy data to create Episode Risk Groups which are used in assigning risk scores to each member of the group.

The Predictive Modeling Methodology provides a better indicator of future costs than past claims experience for the following reasons:

1. The relative risk score for a renewing group is calculated using only members who are active at the time of renewal.
2. The risk scoring process segregates claims for acute conditions from those for chronic conditions. The model generally assumes that costs for chronic conditions

are likely to recur in the future but that the likelihood of acute episodes impacting future costs is reduced.

3. The variability in claim levels for very small cases is such that prior year's experience is not a strong indicator of future year's results

The Episode Risk Group model estimates future costs using each member's historical medical and pharmacy claims data which is adjusted for clinical factors such as severity of diagnosis and identified co-morbidities. Members with chronic conditions are expected to receive similar levels of care in the future and members with acute conditions are expected to have a reduction in expenses in the future (depending on the type of episode.)

The methodology used for California Small Group renewals is similar to the methodology used for new business groups. The primary difference being how each employee's medical history is determined. For new business, the information is obtained from the employees of the group through the individual medical underwriting questionnaire. For renewal business, medical history is obtained through the claim and diagnosis data contained in Aetna's systems.

California Small Group Renewal Relative Risk Score Calculation

Each member with at least 8 months of eligibility during the experience period will receive a prediction of future utilization based upon the clinical and pharmaceutical markers as outlined in the predictive model variables. Each member will receive a baseline prediction which will be increased by the sum of the weights of all variables for which they have shown evidence. For some variables, this evidence must occur in the most recent 12 months, and for other variables, the time period used is the entire time enrolled as a member with Aetna.

In order to calculate a Relative Risk Score (RRS) for each member, the observed and expected prediction would be compared to someone of the same gender, in the same 5 year age band and who had been enrolled as an Aetna member for approximately the same length of time. If the observed prediction for a given member was $4,968 then this prediction would be compared to the average prediction for someone in the same age/gender/duration cell. If, for example, the average prediction for someone in the same age/gender/duration cell was $4,587.20, then the RRS for this member would be $4,968/$4,587.20 = 1.0830

The same logic is used to generate a group level RRS, where the predictions and average predictions based upon age/gender/duration are summed to a group level and then the RRS is calculated by dividing the total prediction by the total average prediction. An example of this on a five member group is shown below:

Member	Age Group	Gender	Duration (Length Enrollment)	Prediction	Average Prediction
1	35-39	Female	12-14 months	$2,700	$2,857.22
2	35-39	Male	5-7 months	$1,600	$1,424.86

3	35-39	Female	15-19 months	$3,100	$2,921.11
4	10-14	Male	12-14 months	$1,200	$1,746.64
5	55-59	Male	24+ months	$3,100	$3,415.45

Sum of predictions	$11,700.00
Sum of Average Predictions	$12,365.28
Relative Risk Score	0.9462

Starting Relative Risk Score (RRS) where rate ups begin: 0.96

Rate Adjustment Factor (RAF) * = min(RRS / Starting RRS, 1.00) * 0.90 (min RAF)
=min(0.9462 / 0.96, 1.00) * .90
=min(.993, 1.00) * .90 = 0.90

* Subject to Aetna's minimum and maximum rate band.
Minimum RAF = 0.90
Maximum RAF = 1.10

* Subject to year over year minimum and maximum change of 10%.

Definitions:

RAF = Risk Adjustment Factor – adjustment to manual rates to account for underlying risk of group

RRS = Relative Risk Score – risk of the group relative to our Aetna's National non-HMO population.

Starting RRS = risk level where rate ups begin so that the appropriate premium is delivered given the distribution of risks (i.e, delivers the desired average rate for the average risk).